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REMARKS

Claims 1-6, 12, 13, 17, 18, 20, 21, and 27-29 remain pending. Claims 7-11, 14-16, 19, and 22-26 have been canceled.

In the Office Action, the Examiner objected to the disclosure; rejected claims 1-6, 8, 9, 13, 14, 17, 18, and 20-29 under 35 U.S.C. § 103(a) as being unpatentable over Hwang et al. (U.S. Patent No. 5,987,120) in view of Albouy (U.S. Patent No. 4,540,853); and rejected claims 7, 10-12, 15, 16, and 19 under 35 U.S.C. § 103(a) as being unpatentable over Hwang et al. in view of Albouy, and further in view of Bijman et al. (U.S. Patent No. 6,590,973).

The objection to the disclosure has been obviated by the amendment thereto.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. See M.P.E.P. § 2143.

Applicants respectfully traverse the § 103(a) rejection of claims 1-6, 13, 17, 18, 20, 21, and 27-29 over Hwang et al. in view of Albouy. Independent claims 1, 4, and 20 require a circuit, method and apparatus including, *inter alia*, “a low pass filter.” Independent claim 13 requires a method including, *inter alia*, “filtering out a polarity reversal that lasts shorter than a defined time.” The combination of Hwang et al. and Albouy, even if it were proper, fails to teach or suggest all elements of the claimed circuit, method and apparatus.

On page 2 of the Office Action, transistor 59, resistor 591, and capacitor 592 in Fig. 1 of

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Hwang et al. are alleged to correspond to the claimed low pass filter. These three components of Hwang et al., however, do not reasonably correspond to the claimed low pass filter, because they do not filter and are not low pass.

As may be seen from Fig. 1, there is no path for the input signal at node A to reach node C, except through transistor 59. The gate of transistor 59 blocks all of the input signal at node A due to the insulated gate in the MOSFET shown. All this input signal can do is turn transistor 59 on or off, and none of it passes transistor 59. Because transistor 59 blocks all of the input signal at node A, it does not pass a portion of it (e.g., act as a “filter”). Thus, components 59, 591, and 592 in Fig. 1 of Hwang et al. do not correspond to a “filter” as set forth in claims 1, 4, and 20.

Further, it is axiomatic that low pass filters do not output high frequencies. Fig. 2 of Hwang et al. illustrates the output (node C) of components 59, 591, and 592. The vertical downward transitions in the signal at node C (e.g., at the “Line-reversal” point and several times during the “Ring” interval) certainly include very high frequencies. Thus, components 59, 591, and 592 also may not reasonably be said to be “low pass,” because they output vertical signal transitions that include very high frequencies. For at least these reasons, the combination of Hwang et al. and Albouy fails to teach or suggest at least the low pass filter set forth in claims 1, 4, and 20.

Regarding independent claim 13, contrary to the allegation on page 4 of the Office Action, the circuit in Fig. 1 of Hwang et al. does not “filter[] out a polarity reversal that lasts shorter than a defined time” as claimed. The circuit in Fig. 1 does not “filter” as explained above with regard to claims 1, 4, and 20. This is apparent from the signal in Fig. 2 of Hwang et al. at node B which includes low periods that reflect the presence of both the single line reversal pulse

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and the series of ring pulses in the signal at node A. Hence, the circuit of Fig. 1 of Hwang et al. does not filter out polarity reversals as set forth in claim 13. Because the combination of Hwang et al. and Albouy fails to teach or suggest all elements of claims 1, 4, 13, and 20, a *prima facie* case of obviousness has not been established for these claims.

A *prima facie* case of obviousness also has not been established for claims 1, 4, 13, and 20, because no motivation or suggestion has been shown to combine Hwang et al. and Albouy. Page 3 of the Office Action provides only a bare conclusion of obviousness. No evidence from either reference or other technical reasoning has been provided to support this conclusion. Without any supporting evidence or facts, a *prima facie* case of obviousness cannot be established. See M.P.E.P. § 2142 ("The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness."). A *prima facie* case of obviousness also has not been established for claims 1, 4, 13, and 20 for at least this additional reason.

Because a *prima facie* case of obviousness has not been established for claims 1, 4, 13, and 20, the § 103(a) rejections of claims 1, 4, 13, and 20 are improper and should be withdrawn. Claims 2, 3, 5, 6, 17, 18, 21, and 27-29 are allowable at least by virtue of their dependency from claims 1, 4, 13, and 20.

Regarding the rejection of claim 12, the addition of Bijman et al. fails to cure the deficiencies in Hwang et al. and Albouy noted above with respect to claim 4. Bijman et al. also fails to teach or suggest the low pass filter element of claim 4, and its addition cannot establish a *prima facie* case of obviousness for this claim.

Reconsideration and allowance of pending claims 1-34 is respectfully requested.

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In the event that any outstanding matters remain in this application, Applicants request that the Examiner contact Alan Pedersen-Giles, attorney for Applicants, at the number below to discuss such matters.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-0221 and please credit any excess fees to such deposit account.

Respectfully submitted,

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